

"Made available under NASA sponsorship
in the interest of early and wide dissemination of Earth Resources Survey
Program information and without liability
for any use made thereof."

E7.3 10300
CR - 130556

NORTH CAROLINA STATE UNIVERSITY

SCHOOL OF PHYSICAL AND MATHEMATICAL SCIENCES

DEPARTMENT OF GEOSCIENCES
Box 5966 Zip 27607

Investigation Title: Utilization of ERTS-A Data in Geological
Evaluation, Regional Planning, Forest Management, and
Water Management in North Carolina

Proposal No. 18

GSFC ID UN 281

Principal Investigator: Charles W. Welby



Date: February 28, 1973

The objective of the contract is to demonstrate the usefulness of
ERTS-1 data to various state agencies.

The period December 1 - January 30 has been spent working with
various state agency personnel to develop in them an appreciation
of the imagery, its potential and its limits. Also experimentation
with enlargements has been undertaken, and it has been found that
a scale of approximately 1:300,000 is a useful scale for many
purposes.

Enlargements of the imagery to a scale of 1:125,000 have been
utilized in study of the Raleigh area, and significant results
lie primarily in the ability to see the urban-woodlands contact
and the encroachment of the urban area into the adjacent countryside.
Reflectance differences in the city correspond to intensity of
landuse and to some socio-economic differences. At a scale of
1:250,000 lakes as small as 0.5 acres have been recognized on Band
6. Siltation in lakes approximately 10 acre in size has been de-
tected.

ERTS-1 imagery at a scale of approximately 1:690,000 has been com-
pared with airphoto mosaics at a scale of 1 inch = 1 mile. The
ERTS-1 imagery can be used at even this large scale to detect lakes
of in excess of one acre area more easily than can be done with
the airphoto mosaic.

(E73-10300) UTILIZATION OF ERTS-A DATA
IN GEOLOGICAL EVALUATION, REGIONAL
PLANNING, FOREST MANAGEMENT, AND WATER
MANAGEMENT IN NORTH (North Carolina State
Univ.) 2 p HC \$3.00 CSCL 08G

N73-18332

Unclas
G3/13 00300

During the Spring Semester ERTS-1 imagery at 1:1,000,000 and 1:500,000 scales will be studied and evaluated by a photogeology class. This exercise will permit us to evaluate systematically the ease of interpretation of the imagery by relatively inexperienced personnel and to evaluate personal factors which may enter into the interpretations. We will continue to make contacts with state agency personnel and to assist them in utilizing the imagery. An ERTS-1 "Newsletter" describing the activities on the project and giving a listing of images available for North Carolina and their quality has received favorable comment.

The funds appear adequate to complete the contract.